

**Record of the Substance of the Telephone Interview**

Participants:    Examiner: Dionne Mayes  
                         Applicant: Sheng-Guo Wang

Date:                10-10-2006

I.     Applicant expresses his thanks to

- the Honorable Under Secretary of Commerce Jon Dudas and the Honorable Commissioner for Patents John Doll for their helpful advice;
- the Examiner Ms. Dionne Mayes for her time, the telephone interview and helpful discussion and suggestion;
- the SPE Steven Griffin for his time and helpful discussion and suggestion through the telephone discussion of 4-27-2006, the Examiner Peter Chin for his time and helpful discussion and suggestion through the interview of 3-11-2005; and
- Applicant expresses his appreciation to the Examiner Mr. Sean Vincent for him to allow Claims 37-39.

II.    Claims discussed:        21 – 22, 24 – 26.

III.   Identification of prior art discussed:

Harding (GB) US 4793840, Yamamura (JP) US 6220057, Kohei (JP) JP 06-206734,  
Saito (JP) US 6438997, Yoshimura (JP) US 5073179, Urruti (US) US 5551967.

IV.   Identification of the principal proposed amendments of a substantive nature discussed:

The following amendments are proposed by Applicant or suggested by the Examiner Dionne Mayes during the interview, or suggested by the Examiner Sean Vincent in his O.A. Further, all these amendments are agreed by the Examiner Ms. Mayes. In the following, the discussed O.A. is Mr. Vincent's O.A. of 7-26-2006, if without a specific date.

1.    Claim 21 will be amended as listed as follows:

- To delete words as marked: "... .. heating and melting said perform-~~for said optical fiber~~; ... ..".

Thus, the rejection to Claim 21 under 112 in the O.A. item 5 is obviated. Then, there is no rejection to the amended Claims 21-22 and 24-25 under 112.

- To add the following limitation from its dependent claims: “calculating a preform deviation of the measured preform diameter or shape from the predetermined preform value, and a fiber diameter deviation of the measured fiber diameter from the predetermined fiber value;  
wherein the control system generates control signals based on the preform deviation and the fiber diameter deviation for controlling  
the feeding speed of said preform and the drawing speed of said optical fiber; ... ..”.

This amendment lets Claim 21 further patentably differ from the prior art.

2. Dependent Claims 22 and 24 will be amended correspondingly in view of the above amendment to Claim 21.
3. Claim 26 will be amended as listed and marked as follows:
  - “... .. heating and melting a preform in a furnace ~~for the optical fiber~~; [for item 6, as suggested by the O.A.]  
while heating and melting, drawing said optical fiber from said preform ~~to form said optical fiber~~; [for item 9]  
measuring the outer diameters of said optical fiber, when that ~~which~~ is bare ~~before coating~~, at two or more different locations by respective measurement devices ~~before the coating~~, [for item 7]  
... ..  
providing a control system with the measurement data from ~~all these~~ said measurement devices respectively at the different locations, ... ..”. [for item 8, as suggested by Ms. Mayes]
  - Thus, the above amendments obviate the rejections in items 6 and 8 of the O.A. Applicant thanks Examiner Mayes’s helpful suggestion for amendments. The “measurement devices” are stated in line 7 of Claim 26.
  - As to item 7, the above marked amendments obviate the rejection. The “coating” method step is in line 13 of Claim 26.

- As to item 9, the words “to form said optical fiber” have been deleted.

However, the suggestion of the O.A. item 9, “while heating and melting, drawing said preform to form an optical fiber”, is not correct.

It is because the Fiber Drawing Capstans 13 is really drawing said optical fiber from said preform as shown in Figures 1-11, as well as the prior art.

Also, please see “drawing the fiber from the preform” in Harding (Col. 1, L.54-55).

Further, please see the O.A. p.4, item 16, lines 2-3, “a fiber was drawn at a drawing speed from the preform” in Harding’s process. [emphasis added]

Moreover, please see the Record of Substance of Telephone Interview of 6-16-2006, in which Examiner Vincent has agreed to Applicant’s opinion as stated above. The SPE also agreed during the discussion of 4-27-2006.

Thus, in view of the above amendment and explanation, the rejection of item 9 should be withdrawn.

- For items 10-11, Applicant explains that the words of “calculates” and “controls” belong to “wherein said control system”, thus Claim 26 is correct.

Examiner Mayes agrees with the explanation.

V. Brief identification of the general thrust of the principal arguments presented to the Examiner:

Applicant briefly describes some claimed key features of the present invention, which patentably differ from the prior art, as follows:

1. Measuring the preform;
2. Controlling the fiber drawing speed and the preform feeding speed based on the preform deviation and the fiber diameter deviation;
3. Control signals are further based on the preform measurement and the predetermined preform value;
4. Double measurements on the bare fiber;
5. The control system controls the optical fiber drawing process based on calculated deviations of the first bare fiber diameter measurement from the first preselected

value and the second bare fiber diameter measurement from the second preselected value.

The followings are presented and briefly discussed after Applicant briefly described the present invention, the prior art, and the application process.

1. There is no suggestion or motivation, either in the references or in the knowledge generally available to ordinary skill, to combine Harding and Yamamura. The O.A. fails to follow MPEP 2141, 706.02(j) and 2142. The suggested combination is inoperable, therefore there is no motivation.
2. Yamamura's method is for drawing a glass ingot, or at best a preform for an optical fiber, but not the optical fiber [col.1, lines 5-10, Field of the Invention]. The final product of his process is: a glass ingot, or at best a preform for optical fiber.
3. The suggested combinations of Harding and Yamamura are inoperable! Thus, the O.A. fails to comply with MPEP2141 (D) and 2142 and the cited court decisions wherein. Applicant gives an example: when Harding's process detects a fiber diameter large, and Yamamura's monitor 6b detects the glass ingot (or preform) diameter small, their two process control systems of Harding's and Yamamura's will give conflict controls for preform movement, thus destroy the references and the whole combined process. Applicant points out that there are a lot of situations making the proposed combination inoperable.
4. The O.A. items 15 (p.4) and 18-20 (p.5) are in error because the fact is that there is no motivation for the proposed combination and the proposed combination is inoperable. Item 19 is also in error further by wrong use of the citation in view of the full citation and MPEP.
5. Even as modified or combined of Harding in view of Yamamura, the resultant teachings still omit one or more of applicant's claimed features as claimed as cited above. MPEP 2141 and 706.02 – the prior art references must teach or suggest all claimed limitations.
6. The O.A. fails to follow MPEP 2143.03 All Claim Limitations Must Be Taught or Suggested by the prior art. Please see the court decisions and MPEP 2143. The objective evidence is that the references have no any teaching or suggestion to one or

more of above listed claimed key feature limitations. The O.A. items 18-20 partially recognize this fact, but fail to follow MPEP 2143.03, 2141, 706.02(j).

7. The proposed combination in the O.A. items 18-20 distorts and changes the reference operation principles. Thus, the O.A. fails to comply with MPEP 2143.01.
8. The reference teaches away from the claimed present invention. The O.A. fails to follow MPEP 2141.02 and 2145X.D.2.
9. The O.A. items 17 and 23 are in error because the O.A. fails to follow MPEP 2141 and the court decision. The claimed invention must be considered as a whole, and the references must be considered as a whole.

The O.A. item 17 fails to read “whereby said optical fiber drawing process is robustly controlled against deviations of the preform outer diameter or shape at different locations and against deviations of various performs” in Claim 21 as a whole, that is clearly not discussed by Harding and clearly can not be read on the long term and short term control by Harding [col.3, lines 13-20] because Harding’s process lacks the preform measurement step and his control principle does not use the preform deviation. The O.A. is in error by cutting piece words “robustly controlled” out, and fails to read the claim as a whole and the reference as a whole.

The O.A. item 23 fails to read “whereby to robustly control said optical fiber drawing process by the double measurements of the bare fiber diameters from said measurement devices” in Claim 26 as a whole as required, but cuts piece words “robustly controlled” out. That clearly can not be read on the Harding’s long term and short term control because Harding’s control lacks the double measurements of the bare fiber for his control. The key is the above claimed key feature steps.

10. The O.A. fails to establish a prima facie case for its rejection to Claims 21-22 and 24-25, as well as 26 discussed below. Please see the requirements in MPEP 706.02(j), 2141 and 2142, and the court decisions.
11. The O.A. rejection to Claim 26 on Harding and Sumimoto [it should read “Sumitomo”, or correctly “Kohei”] is in error because there is no motivation for combination. Applicant guesses that the O.A. implies Kohei (JP 06-206734).
12. Applicant points out that the English language abstract and the translation of Kohei

translated from Japanese and cited by Mr. Hoffmann in file is Not Correct, as the “NOTICE” recognizes. Thus, it is not proper to use this incorrect translation for decision or action. The O.A. item 21 is in error.

13. There is no motivation or suggestion for combination or modification of Harding and Kohei or Saito. Please see MPEP 2141, 706.02(j) and 2142.
14. Kohei or Yoshimura or Urruti or Harding, all these processes lack “double” measurements of the bare fiber for their control principles. Yoshimura’s control principle may use either measurement device 31 for a low speed drawing process or measurement device 32 for a high speed drawing process by switch. Kohei’s control principle [0007] uses either measurement device 21 at a drawing speed rising period (i.e., the beginning period with a low drawing speed) or measurement device 14 at the time after a stable fiber drawing speed is reached, by switch from device 21 to device 14. Kohei or Yoshimura has and uses only one measurement for the control at any particular time. Urruti or Harding also has only one measurement of the bare fiber at the any time. In the preform manufacturing, Saito’s R1 is a reference value and R2 is a measurement value, i.e., of course, clearly Saito has NO any bare fiber double measurements as claimed in Claim 26.
15. More than a decade has passed since 1980’s, and it is the fact that all these respectable exports and inventors do not teach or suggest double measurements of the bare fiber at any time. How can an ordinary skill be motivated to do double measurements of the bare fiber?

The clear and objective evidence of the issue of these patents further clearly and strongly show that the claimed present invention is Unobvious and Patentable.

16. When the Examiner Mr. John Hoffmann was ill and the SPE was out of office on the scheduled interview day 3-11-2005, with the USPTO front desk peoples’ help, Applicant was interviewed by the Examiner Mr. Peter Chin at the USPTO in Alexandria, VA, on that day.

Examiner Chin looked at Applicant’s presented summary diagrams of the present invention and references, and a comparison table. He uses the word “double” into the Summary, after Applicant described the present invention and key features and

differences from prior art. Examiner Chin is reasonable and recognizes that “double outer diameter measurement of the bare fiber” patentably differs from prior art.

17. The proposed modification or combination can not change the reference operation principles. However, the O.A. fails to follow that decision.

What item 24 suggests is to change the operation principle of either Harding or Kohei. They both use ONLY ONE bare fiber measurement for the process control, e.g., either from device 21 or device 14 in Kohei's. Thus, the O.A. fails to comply with MPEP 2143.01.

18. Even as modified or combined of Harding and Kohei, the resultant teachings still omit one or more of applicant's claimed features as claimed as listed above. MPEP 2141, 706.02 and 2142.

The O.A. fails to follow MPEP 2143.03 All Claim Limitations Must Be Taught or Suggested by the prior art.

19. The O.A. changes the references principles with the hindsight from the present invention. It is not allowed. Please see MPEP 2141(C) and the cited court decision.

20. The O.A. of 6-6-2005 [p.17, L.17-18] has recognized that “Examiner completely understands this – no rejection indicates the motivation comes from the references themselves.” Further, the previous examiner states: “Presently, one of ordinary skill would combine the relevant teachings to obtain ‘dramatic improvement’ and a significantly more robust process” [p.17, L.18-20]. [emphasis added]

Here, a key word is “Presently” that the O.A. of 6-6-2005 states and recognizes.

This is objective evidence that the motivation for combination of the references is based on hindsight from the present invention, and the Office Actions fail to comply with MPEP 2141.

VI. General indication of any other pertinent matters discussed:

- Applicant expresses that the 4-27-2006 telephone discussion between the SPE and Applicant really has solved everything. Everything is allowed and solved at that time.
- Applicant expresses his un-satisfaction for the O.A. doing from the beginning again and again with again and again new search, because it has been searched for more than 2

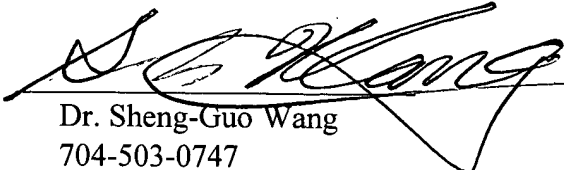
years and wasted both-sides time. Applicant, as a scientist in engineering, expresses that he also has done a detail search and the present invention does patentably differ from all prior art. The previous O.As made so many inoperable combinations among the references, and distorted references and the present invention for the unreasonable rejection to the present invention, as pointed out in the Replies.

- Applicant respectfully requests examiners to follow the law, court decisions and MPEP.

VII. General results or outcome of the interview:

1. With the Examiner's helpful suggestion, the 112-issue of items 2-11 has been solved.
2. At the beginning of the interview, the Examiner expresses that she did not have a forward time to prepare for the case, and unfortunately she would not be able to commit anything at this discussion. The Examiner thinks this is an opportunity for her to get idea of Applicant's arguments, and idea how Applicant is planning to respond Mr. Vincent's O.A. Then, after Applicant's response, Examiner will have a little bit more time to take a look at it. The Examiner lets Applicant present arguments and the case for discussion.
3. It is noticed that the case was reassigned to the new Examiner just about a week ago, and understood that the new Examiner needs time to read the file for a preparation.
4. The Examiner expresses that Applicant presently gives convincing reasons. The Examiner advises that Applicant needs to write them in the Reply for consideration.
5. Applicant will write and submit a detailed Reply based on the facts, laws, rules, decisions and MPEP.
6. The Examiner expresses that if she has any questions, she will call Applicant. Applicant very appreciates that effective way for solution.
7. Applicant expresses that all these amended claims are patentable now, and he respectfully requests a timely Notice of Allowance be issued in this case.

Respectfully submitted by the applicant

  
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